```
=> s hypoglycemic or antidiabetic
         11693 HYPOGLYCEMIC
          4148 HYPOGLYCEMICS
         14156 HYPOGLYCEMIC
                 (HYPOGLYCEMIC OR HYPOGLYCEMICS)
         27016 ANTIDIABETIC
          5136 ANTIDIABETICS
         29649 ANTIDIABETIC
                 (ANTIDIABETIC OR ANTIDIABETICS)
L1       37002 HYPOGLYCEMIC OR ANTIDIABETIC

=> s hepato? or ?hepatic or liver
        138382 HEPATO?
        137359 ?HEPATIC
        577210 LIVER
         37468 LIVERS
        580343 LIVER
                 (LIVER OR LIVERS)
L2      634251 HEPATO? OR ?HEPATIC OR LIVER

=> s l1 or l2
L3      666069 L1 OR L2

=> s ?laricires inol or ?taxiresinol
           810 ?LARICIRESINOL
            47 ?TAXIRESINOL
L4         822 ?LARICIRESINOL OR ?TAXIRESINOL

=> s l3 and l4
L5          44 L3 AND L4

=> d ibib abs 1-10

L5   ANSWER 1 OF 44  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2007:751050  CAPLUS
DOCUMENT NUMBER:          147:296046
TITLE:                    Bioactive constituents from chinese natural medicines.
                          XXV. New flavonol bisdesmosides, sarmenosides I, II,
                          III, and IV, with hepatoprotective activity
                          from Sedum sarmentosum (Crassulaceae)
AUTHOR(S):                Zhang, Yi; Morikawa, Toshio; Nakamura, Seikou;
                          Ninomiya, Kiyofumi; Matsuda, Hisashi; Muraoka, Osamu;
                          Yoshikawa, Masayuki
CORPORATE SOURCE:         Kyoto Pharmaceutical University, Misasagi,
                          Yamashina-ku, Kyoto, 607-8412, Japan
SOURCE:                   Heterocycles (2007), 71(7), 1565-1576
                          CODEN: HTCYAM; ISSN: 0385-5414
PUBLISHER:                Japan Institute of Heterocyclic Chemistry
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   Four new flavonol bisdesmosides, sarmenosides I, II, III, and IV, were
     isolated from the whole plant of S. sarmentosum.  Their structures were
     elucidated on the basis of chemical and physicochem. evidence.  Among them,
     sarmenoside III was found to show potent hepatoprotective effect
     (IC50 = 4.4 μM) on D-galactosamine-induced cytotoxicity in primary
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cultured mouse hepatocytes.
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:619643 CAPLUS
DOCUMENT NUMBER: 147:39032
TITLE: Preparation of lignan extracts and compositions containing them
INVENTOR(S): Empie, Mark; Fletcher, William Walter; Gottemoller, Thomas V.; Grabiel, Richard D.; Karcher, Lawrence P.; Peterson, Sigmund J.; Sun, Sam Zhiyong
PATENT ASSIGNEE(S): Archer-Daniels-Midland Company, USA
SOURCE: PCT Int. Appl., 62pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007065023	A2	20070607	WO 2006-US46317	20061204
WO 2007065023	A3	20071122		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

US 2007141178	A1	20070621	US 2006-566356	20061204
PRIORITY APPLN. INFO.:			US 2005-742082P	P 20051202
			US 2006-809652P	P 20060531

AB Processes for obtaining lignan exts. from plant materials are disclosed. Compns. including lignan exts. as well as uses of the lignan exts. are also disclosed. A lignan extract was produced from defatted flaxseed meal. Secoisolariciresinol diglucoside was determined to be present in the extract Clin. trials assayed plasma lipids in hypercholesterolemic subjects and a study was performed to determine the effect of lignan exts. on benign prostatic hyperplasia in men.

L5 ANSWER 3 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:562203 CAPLUS
DOCUMENT NUMBER: 147:157359
TITLE: Lignans from the fruits of Cornus kousa Burg. and their cytotoxic effects on human cancer cell lines
AUTHOR(S): Lee, Dae-Young; Song, Myoung-Chong; Yoo, Ki-Hyun; Bang, Myun-Ho; Chung, In-Sik; Kim, Sung-Hoon; Kim, Dae-Keun; Kwon, Byoung-Mog; Jeong, Tae-Sook; Park, Mi-Hyun; Baek, Nam-In

CORPORATE SOURCE: Graduate School of Biotechnology & Plant Metabolism Research Center, Kyung Hee University, Suwon, 449-701, S. Korea
SOURCE: Archives of Pharmacal Research (2007), 30(4), 402-407 CODEN: APHRDQ; ISSN: 0253-6269
PUBLISHER: Pharmaceutical Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The fruits of Cornus kousa Burg. were extracted with 80% aqueous MeOH, and the concentrated extract partitioned with EtOAc, n-BuOH and H2O. Six lignans were isolated from the EtOAc fraction through repeated silica gel, ODS and Sephadex LH-20 column chromatogs. From the physico-chemical data, including NMR, MS and IR, the chemical structures of the compds. were determined to be (+)-pinoresinol (1), (-)-balanophonin (2), (+)-laricresinol (3), erythro-guaiacylglycerol-β-coniferyl aldehyde ether (4), threo-guaiacylglycerol-β-coniferyl aldehyde ether (5) and dihydrodehydrodiconiferyl alc. (6), which were isolated for the first time from this plant. Most of these compds. showed cytotoxicity against human colon carcinoma (HCT-116) and human hepatocellular carcinoma (HepG2) cell lines in vitro, with IC50 values ranging from 19.1 to 71.3 μg/mL.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:514051 CAPLUS
DOCUMENT NUMBER: 146:474726
TITLE: Tissue Distribution of Lignans in Rats in Response to Diet, Dose-Response, and Competition with Isoflavones
AUTHOR(S): Murray, Timothy; Kang, Jinguo; Astheimer, Lee; Price, William E.
CORPORATE SOURCE: School of Health Sciences and Department of Chemistry, University of Wollongong, Wollongong, New South Wales, 2522, Australia
SOURCE: Journal of Agricultural and Food Chemistry (2007), 55(12), 4907-4912 CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This paper investigates the occurrence and distribution of the lignan metabolites enterodiol (END) and enterolactone (ENL) and the isoflavone daidzein (DAID) in rat tissues by use of liquid chromatog.-electrospray ionization mass spectrometry (LC-ESI/MSn) following a variety of dietary regimes. Furthermore, we examined the dose-response and distribution of END and ENL in liver, testes, prostate, and lung, and we investigated the effects of competition between lignans and isoflavones on metabolite distribution. In liver, testes, prostate, and lung tissue, dose-related increases in END concentration were observed In the testes, coadministration of 60 mg/kg secoisolariciresinol diglycoside (SDG) with 60 mg/kg isoflavones produced alterations in the resulting metabolite profile, causing increased END concentration and decreased DAID concentration Results indicate lignan accumulation in tissues occurs, and coadministration of lignans with isoflavones affects the metabolite

profile, with effects dependent on tissue type.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:271003 CAPLUS
DOCUMENT NUMBER: 147:363957
TITLE: Antimicrobial and cytotoxic knotwood extracts and related pure compounds and their effects on food-associated microorganisms
AUTHOR(S): Vaelimaa, Anna-Liisa; Honkalampi-Haemaelaeinen, Ulla; Pietarinen, Suvi; Willfoer, Stefan; Holmbom, Bjarne; Von Wright, Atte
CORPORATE SOURCE: Institute of Environmental Engineering and Biotechnology, Tampere University of Technology, Tampere, FIN-33101, Finland
SOURCE: International Journal of Food Microbiology (2007), 115(2), 235-243
CODEN: IJFMDD; ISSN: 0168-1605
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Knotwood or bark exts. prepared from 30 species of hard and soft wood trees as well as selected pure compds. (lignans, stilbenes and flavonoids) were assayed for their antimicrobial activity against a battery of both gram pos. and neg. bacteria, yeasts, and filamentous fungi (Bacillus cereus, Staphylococcus aureus, Listeria monocytogenes, Lactobacillus plantarum, Escherichia coli, Salmonella infantis, Pseudomonas fluorescens, Candida albicans, Saccharomyces cerevisiae, Aspergillus fumigatus and Penicillium brevicompactum). By far the most consistent antibacterial and antifungal properties were associated with exts. of Pinus species. These exts. showed also cytotoxicity against a mouse hepatoma cell line. Both antimicrobial and cytotoxic properties correlated with the stilbene content of the exts. Purified stilbenes showed the most consistent antimicrobial and cytotoxic activities, while purified lignans had marginal effects, only. The results suggest that stilbenes account both for the antimicrobial and cytotoxic properties of Pinus knotwood exts.
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:68890 CAPLUS
DOCUMENT NUMBER: 146:121100
TITLE: Effects of flaxseed derivatives in experimental polycystic kidney disease vary with animal gender
AUTHOR(S): Ogborn, Malcolm R.; Nitschmann, Evan; Bankovic-Calic, Neda; Weiler, Hope A.; Aukema, Harold M.
CORPORATE SOURCE: Department of Pediatrics and Child Health, University of Manitoba, Winnipeg, Can.
SOURCE: Lipids (2006), 41(12), 1141-1149
CODEN: LPDSAP; ISSN: 0024-4201
PUBLISHER: AOCS Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Flaxseed derivs. including both flaxseed oil and flax lignan can modify the progression of renal injury in animal models, including Han:SPRD-cy

polycystic kidney disease (PKD). Gender is a significant factor in the progression of many human renal diseases, but the role of gender in the response to nutrition intervention in renal disease is unclear. Male and female Han:SPRD-cy rats or normal littermates were fed corn oil (CO) or flaxseed oil (FO) diets, with or without the flax lignan secoisolariciresinol diglycoside (SDG) added at 20 mg/kg feed. Renal injury was assessed morphometrically and biochem. Renal and hepatic polyunsatd. fatty acid (PUFA) composition was assessed by GC and renal PGE2 release by ELISA. FO preserved body weight in PKD males, with no effects in females. SDG decreased body weight in both normal and PKD females. FO decreased proteinuria in both male and female PKD rats. FO decreased cystic change and renal inflammation in PKD males, but decreased cystic change, fibrosis, renal inflammation, tissue lipid peroxides, and epithelial proliferation in PKD females. SDG decreased renal inflammation in all rats and lipid peroxides in PKD females. A strong interaction between SDG and FO was observed in renal FA composition of female kidneys only, suggesting increased conversion of C18 PUFA to C20 PUFA. FO decreased renal release of PGE2 in both genders. Thus, gender influences the effects of dietary flaxseed derivs. in Han:SPRD-cy rats. Gender-based responses to environmental factors, such as dietary lipid sources and micronutrients, may contribute to gender-based differences in disease progression rates.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1252717 CAPLUS
DOCUMENT NUMBER: 146:802
TITLE: Antioxidant SDG for treatment of atherosclerosis and other oxidative stress-related diseases
INVENTOR(S): Prasad, Kailash
PATENT ASSIGNEE(S): University of Saskatchewan Technologies Inc., Can.
SOURCE: Can. Pat. Appl., 25pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2563381	A1	19971004	CA 1997-2563381	19970403
CA 2201652	A1	19971004	CA 1997-2201652	19970403
CA 2201652	C	20070911		
PRIORITY APPLN. INFO.:			US 1996-14818P P	19960404
			CA 1997-2201652 A3	19970403

AB The compound secoisolariciresinol diglucoside (SDG),obtained from flaxseed is used for reducing or preventing the development of hypercholesterolemic atherosclerosis, for reducing total cholesterol in humans or animals and for treating diabetes mellitus. SDG prevented endotoxin shock-induced depression of cardiac function and contractility in dogs and prevented the development of type 1 and type 2 diabetes in rats. Hypercholesterolemia was reduced in rabbits whose diets were supplemented with SDG.

L5 ANSWER 8 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:804460 CAPLUS
DOCUMENT NUMBER: 145:187861
TITLE: Assessing exposure to lignans and their metabolites in humans
AUTHOR(S): Lampe, Johanna W.; Atkinson, Charlotte; Hullar, Meredith A. J.
CORPORATE SOURCE: Fred Hutchinson Cancer Research Center, Cancer Prevention Program, Seattle, WA, 98109, USA
SOURCE: Journal of AOAC International (2006), 89(4), 1174-1181 CODEN: JAINEE; ISSN: 1060-3271
PUBLISHER: AOAC International
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Phytoestrogens occur naturally in plants and are structurally similar to mammalian estrogens. Lignans phytoestrogens can be metabolized to biol. active enterolignans, enterodiol, and enterolactone by intestinal bacteria. Secoisolariciresinol diglucoside (SDG) is a plant lignan metabolized to enterodiol and subsequently to enterolactone. Matairesinol lignan is metabolized to enterolactone. Other dietary enterolignan precursors include lariciresinol, pinoresinol, syringaresinol, arctigenin, and sesamin. Enterolignan exposure is determined in part by dietary intake of the precursors, intestinal bacterial activity, and host conjugating enzyme activity. A single SDG dose results in enterolignan appearance in blood plasma 8-10 h later, which is a time-frame for colonic bacterial metabolism and absorption. Conjugation of enterolignans with sulfate and glucuronic acid occurs in the intestinal wall and liver, with glucuronides being the predominant conjugates. Controlled feeding studies show dose-dependent urinary lignan excretion in response to consumption of flaxseed (source of SDG), but even in controlled studies there is substantial interindividual variation in blood plasma concns. and urinary excretion of enterolignans. The complex interactions between colonic environment and external and internal factors likely contribute to this variation. Understanding the sources of variation and measuring the relevant compds. are important for effective evaluation of the impact of lignans on human health.
REFERENCE COUNT: 79 THERE ARE 79 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:804457 CAPLUS
DOCUMENT NUMBER: 145:187239
TITLE: Flax lignans-analytical methods and how they influence our understanding of biological activity
AUTHOR(S): Muir, Alister D.
CORPORATE SOURCE: Agriculture and Agri-Food Canada, Saskatoon, SK, S7N 0X2, Can.
SOURCE: Journal of AOAC International (2006), 89(4), 1147-1157 CODEN: JAINEE; ISSN: 1060-3271
PUBLISHER: AOAC International
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Flaxseed (Linum usitatissimum L.) is a major source of dietary intake of lignans by virtue of the high concns. (0.7-1.5%) that are present in the seed. The principal lignan present in flaxseed is secoisolariciresinol diglucoside (SDG), which occurs as a component of a linear ester-linked complex in which the C6-OH of the

glucose of SDG is esterified to the carboxylic acid of hydroxymethylglutaric acid. Also present in flaxseed and in resulting lignan exts. are significant quantities of 2 cinnamic acid glycosides. The emerging understanding of the biol. activity of flax lignans is based on studies using a variety of materials ranging from whole ground seed to pure SDG. The underlying assumption of most of these studies is that the biol. activity of flax lignans results from their conversion to the mammalian lignans enterolactone (EL) and enterodiol (ED). There are, however, several intermediate compds. generated during the digestion and metabolism of flax lignans, including SDG and its aglycons and secoisolariciresinol (Seco), that are good candidates to be the principal bioactive mol. This review will document the history of the development of lignan anal. methods and illustrate how anal. methods have influenced the interpretation of animal and human trials and our understanding of the biol. activity of flax lignans.

REFERENCE COUNT: 128 THERE ARE 128 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:514716 CAPLUS

DOCUMENT NUMBER: 145:163155

TITLE: Pregnane, coumarin and lupane derivatives and cytotoxic constituents from Helicteres angustifolia

AUTHOR(S): Chen, Wenliang; Tang, Weidong; Lou, Liguang; Zhao, Weimin

CORPORATE SOURCE: Shanghai Institute of Materia Medica, Shanghai Institutes for Biological Sciences, Department of Natural Products Chemistry, Chinese Academy of Sciences, Shanghai, 201203, Peop. Rep. China

SOURCE: Phytochemistry (Elsevier) (2006), 67(10), 1041-1047 CODEN: PYTCAS; ISSN: 0031-9422

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 2α,7β,20α-Trihydroxy-3β,21-dimethoxy-5-pregnene (1), 6,7,9α-trihydroxy-3,8,11α-trimethylcyclohexo-[d,e]-coumarin (2), 3β-hydroxy-27-benzoyloxylup-20(29)-en-28-oic acid (3), and 3β-hydroxy-27-benzoyloxylup-20(29)-en-28-oic acid Me ester (4), along with 24 known compds. were isolated and structurally characterized from roots and aerial parts of Helicteres angustifolia (Sterculiaceae). In a preliminary bioassay, the two cucurbitacin derivs., cucurbitacin D and J exhibited significant inhibitory activities against the growth of both hepatocellular carcinoma BEL-7402 cells and malignant melanoma SK-MEL-28 cells in vitro.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT